

## ***Attachment 1: Description of Emission Reduction Measure Form***

*Please fill out one form for each emission reduction measure. See instructions in Attachment 2.*

**Title: Accelerated Zero-Carbon Procurement: Renewable Energy Price Benchmark**

**Type of Measure (check all that apply):**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Direct Regulation | <input type="checkbox"/> Market-Based Compliance          |
| <input type="checkbox"/> Monetary Incentive           | <input type="checkbox"/> Non-Monetary Incentive           |
| <input type="checkbox"/> Voluntary                    | <input type="checkbox"/> Alternative Compliance Mechanism |
| <input type="checkbox"/> Other Describe:              |   |

**Responsible Agency: CPUC, CEC and Legislature**

**Sector:**

- |   |  |
|---|--|
| <input type="checkbox"/> Transportation   | <input checked="" type="checkbox"/> Electricity Generation |
| <input type="checkbox"/> Other Industrial | <input type="checkbox"/> Refineries                        |
| <input type="checkbox"/> Agriculture      | <input type="checkbox"/> Cement                            |
| <input type="checkbox"/> Sequestration    | <input type="checkbox"/> Other Describe:                   |

**2020 Baseline Emissions Assumed (MMT CO<sub>2</sub>E): 100.095 MMT CO<sub>2</sub>e**

**Percent Reduction in 2020: 14.2% (based on 33% RPS)**

**Cost-Effectiveness (\$/metric ton CO<sub>2</sub>E) in 2020: N/A**

---

**Description:** California has well-developed policy tools in place today that will achieve carbon reductions in the energy sector: The Renewable Portfolio Standard (RPS) Program, the California Solar Initiative (CSI), energy efficiency programs and building standards, the Self-Generation Incentive Program, and the Emissions Performance Standard (EPS, enacted by SB 1368).

The CPUC, in implementing the RPS law, has relied on a “market price referent” (MPR) developed each year to serve as the cap on the price paid to renewable generators that can be recovered through an investor-owned utility’s (IOU’s) energy rates. The MPR is based on long term contracts or the ownership and operation of a combined cycle, natural-gas fired proxy power plant. The MPR is not founded on, nor does it include, a valuation of the environmental benefits of renewable energy. In CPUC Decision (D.) 07-09-024, issued in late September 2007, the CPUC did grant a request to include a GHG adder to be calculated using the E3 model, which is used to calculate applicable

to energy efficiency programs. That decision limited the inclusion of the GHG adder to the 2007 MPR only.

Accelerated expansion of utility-scale and distributed renewable construction and deployment on the scale necessary to achieve AB 32 targets will require the state to reform the way that renewable energy and distributed generation are valued and priced. The CEC recommended in its 2006 Integrated Energy Policy Report (IEPR) Update, that “(a)lternative structures to meet 2020 Renewables Portfolio Standard goals, including whether revised system benefit charge mechanisms or feed-in tariffs would spur additional renewable development” be further analyzed for the post-2010 period, as well as “(c)hanging or eliminating the market price referent/supplemental energy payment award structure”.

The CEC and CPUC should be required to develop an appropriate pricing benchmark for renewable power. This pricing methodology would replace the current approach, and could even be used to set the rate for feed-in tariffs for renewables procurement beginning in 2010. In order to function in this manner, and to spur new renewable development, the benchmark must, at the least, provide the following:

- 1) Long-term certainty. The benchmark must serve as the standard for price reasonableness for renewable procurement by all load-serving entities. Regulatory agencies must ensure that this benchmark will be consistently applied over various contract lengths, to provide developers with the confidence to invest in renewable projects and LSEs with cost recovery assurances.
- 2) Valuation of externalities. The benchmark must include values for all air pollution and greenhouse gases emissions avoided by renewable generation, economic benefit of renewables as a hedge against natural gas price volatility and diversification of the generation resource mix. In determining the price, the CPUC and the CEC should begin with an assessment of the current technology status and E3 methodology for calculating externality values.
- 3) Assessment of the current status of the technology. The CEC and CPUC should also assess the long-term ownership, operating, and maintenance costs associated with fixed-price electricity from new renewable generating facilities. The unique attributes and benefits of each type of renewable resource and generating technology should also be reflected in the benchmark price.
- 4) Process of review and adjustment. The CEC and CPUC should establish an ongoing review process and metrics to judge progress in technology innovation. The purpose is to evaluate progress in renewable development. The amount of the benchmark should be adjusted and reduced over time to achieve greater efficiencies and technological innovation.

5) Current and future policy goals. The amount of the benchmark price must also take into consideration the urgency of achieving the 33% renewable procurement target and AB 32 emissions limits by 2020.

**Emission Reduction Calculations and Assumptions:** Total emission reductions are based on a 33% RPS, and are assumed to be 11 MMT CO<sub>2</sub>E for the IOUs, and 3.2 additional MMT CO<sub>2</sub>E from municipal utilities.

**Cost-Effectiveness Calculation and Assumptions:** N/A

**Implementation Barriers and Ways to Overcome Them:** The establishment of the policy itself will likely be the largest barrier. The process for setting the benchmark will likely be done through a joint CEC/CPUC proceeding. There will be disagreement between parties to that proceeding over the appropriate values to include in formulating the benchmark. Adjustments will likely be needed to the benchmark, which can occur over time.

**Potential Impact on Criteria and Toxic Pollutants:** Renewable energy is zero or near-zero emissions. Displacing natural gas burning generation with renewable energy resources will result in substantial reductions in all criteria air pollutants, especially nitrogen dioxide (NO<sub>x</sub>).

Name: Rachel McMahon

Organization: Center for Energy Efficiency and Renewable Technologies

Phone/e-mail: 916-442-7785/rachel@ceert.org